

R E M A R K S

This is in response to the Official Action mailed January 31, 2002 for the above-identified application. Claim 3 has been canceled. Claims 1-2 and 4-17 are pending in this application.

The specification has been amended to state that this application is a national phase application of International Application No. PCT/JP00/02918, which was filed on May 2, 2000 and which published in Japanese on November 16, 2000, which in turn claims priority from Japanese Application No. 11/127983, which was filed on May 10, 1999. It is respectfully submitted that no new matter has been added.

The Examiner has noted that the Information Disclosure Statement filed on March 8, 2001 did not include a PTO-1449 form. It is respectfully submitted that all the documents that Applicants inadvertently failed to disclose in the March 8, 2001 Information Disclosure Statement were disclosed in the Information Disclosure Statement filed on May 29, 2001.

Claims 2-5, 7-8 and 13-15 have been rejected under 35 U.S.C. § 112, second paragraph as indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Several grounds have been given for the rejection. Each ground is addressed separately below.

Claim 2 recites "the phenol resin is one prepared...." Claims 3, 5, and 7-8 contain similar recitations containing the term "one." According to the Examiner, the term "one" renders the above claims unclear. Accordingly, the term "one" has been deleted from Claims 2, 5, 7-8 in accordance with the Examiner's suggestion. Similarly, the term "one" has been deleted from the

phrase "one prepared by reacting phenol..." recited in now canceled Claim 3 and incorporated into amended Claim 1.

Claim 3 has now been canceled and the limitation "under an increased pressure" has been incorporated into Claim 1. According to the Examiner, the term "increased" is unclear. Accordingly, Claim 1 has been amended to recite that the reactants are reacted under an increased pressure as compared to atmospheric pressure. It is respectfully submitted that the amendment is supported by the specification as originally filed (*see, e.g.*, page 17, line 18) and therefore does not constitute new matter.

Claim 4 recites "the volatile base catalyst in the resol phenol resin." According to the Examiner, the phrase "in the resol phenol resin" is unclear. Accordingly, Claim 4 has been amended to delete the phrase "in the resol phenol resin."

Claim 8 as originally filed recited "reacting the same...." The term "the same" has been replaced by the phrase "the polyhydric alcohol ester of rosin" in accordance with the Examiner's suggestion.

Claim 13 as originally filed recited "a softening point (ring and ball method) of 140 to 190 °C." Claim 13 has now been amended to recite "a softening point, measured by the ring and ball method, of 140 to 190 °C" in accordance with the Examiner's suggestion. Similarly, the parentheses in Claim 14 have been removed.

Claim 15 as originally filed recited "a petroleum hydrocarbon solvent (boiling point 276 to 313 °C, aniline point 69°C)" Claim 15 has now been amended to recite "a petroleum

## PATENT

hydrocarbon solvent having boiling point of 276 to 313 °C and aniline point of 69°C" in accordance with the Examiner's suggestion.

Claims 1-2, 4-11 and 13-17 have been rejected under 35 U.S.C. § 102(b) as anticipated by JP 66-27373. The Examiner's position is that the process disclosed in JP 55-27373 wherein rosin is reacted with resol phenol resin and polyhydric alcohol meets the limitation of the present invention.

However, it is respectfully submitted that Claims 1-2, 4-11 and 13-17 are not anticipated by JP 66-27373. As discussed above in the context of the rejection of Claim 3 under 35 U.S.C. § 112, second paragraph, Claim 1 has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. As discussed above, the amendment is supported by Claim 3 as originally filed and by the specification as originally filed (*see, e.g.*, page 17, line 18) and therefore does not constitute new matter. Claim 3 was not rejected as anticipated by JP 66-27373. Accordingly, it is respectfully submitted that Claim 1 as amended (and Claims 2, 4-11 and 13-17) is not anticipated by JP 66-27373. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 102(b) of Claims 1-2, 4-11 and 13-17 as anticipated by JP 66-27373 is respectfully requested.

Claims 1-2, 4-6, 10, 12-14, and 16-17 have been rejected under 35 U.S.C. § 102(b) as anticipated by JP 7-126338. The Examiner's position is that the process disclosed in JP 7-126338

## PATENT

wherein rosin is reacted with resol phenol resin and polyhydric alcohol meets the limitation of the present invention.

However, it is respectfully submitted that Claims 1-2, 4-6, 10, 12-14 and 16-17 are not anticipated by JP 7-126338. As discussed above, Claim 1 has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as anticipated by JP 7-126338. Accordingly, it is respectfully submitted that Claim 1 as amended (and Claims 2, 4-6, 10, 12-14, and 16-17) is not anticipated by JP 7-126338. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 102(b) of Claims 1-2, 4-6, 10, 12-14 and 16-17 as anticipated by JP 7-126338 is respectfully requested.

Claims 1-2, 4-6, 8-11, 14, and 16-17 have been rejected under 35 U.S.C. § 102(b) as anticipated by JP 63-86771. The Examiner's position is that the process disclosed in JP 63-86771 wherein rosin is reacted with resol phenol resin and polyhydric alcohol meets the limitation of the present invention.

However, it is respectfully submitted that Claims 1-2, 4-6, 8-11, 14 and 16-17 are not anticipated by JP 63-86771. As discussed above, Claim 1 has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as anticipated by JP 63-86771. Accordingly, it is respectfully submitted that Claim 1 as amended (and Claims 2, 4-6, 8-11, 14, and 16-17) is not anticipated by JP 63-86771. In view of the

## PATENT

foregoing, withdrawal of the rejection under 35 U.S.C. § 102(b) of Claims 1-2, 4-6, 8-11, 14 and 16-17 as anticipated by JP 63-86771 is respectfully requested.

Claim 3 has been rejected under 35 U.S.C. § 103(a) as obvious in view of JP 55-27373, JP 7-126338, or JP 63-86771 in combination with U.S. Patent No. 5,908,914 (Dando et al.). The teachings of JP 55-27373, JP 7-126338, and JP 63-86771 have been discussed above. The Examiner acknowledges that JP 55-27373, JP 7-126338, and JP 63-86771 do not disclose conducting a reaction under an increased pressure as compared to atmospheric pressure. However, according to the Examiner, Dando et al. discloses that preparing phenol-formaldehyde in a sealed reactor under pressure has several advantages over using an open reactor. The Examiner's position is that it would have been obvious to combine the teachings of Dando et al. with the teachings of JP 55-27373, JP 7-126338, and JP 63-86771 to obtain the present invention.

However, it respectfully submitted that Claim 1, which has been amended to incorporate the limitations of now canceled Claim 3, is not obvious in view of JP 55-27373, JP 7-126338, or JP 63-86771 in combination with Dando et al. As discussed above, Claim 1 has been amended to expressly recite that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 1 has been further amended to recite that phenol and formaldehyde react in the absence of a solvent. In contrast, none of JP 55-27373, JP 7-126338, and JP 63-86771 discloses or suggests reacting phenol and formaldehyde under an increased pressure in the absence of a solvent. Dando et al. does not cure the deficiencies of JP 55-27373, JP 7-126338, and JP 63-86771. Dando et al., which discloses the preparation of a benzylic ether phenolic resol resin, requires the presence of a catalytic amount of a divalent metal

## PATENT

(*see* col. 2, lines 22-23). Furthermore, Dando et al. does not disclose or suggest using the phenolic resin for the preparation of a phenol-modified rosin ester, as required by Claim 1. Accordingly, it is respectfully submitted that Claim 1 as amended is nonobvious and patentable in view of JP 55-27373, JP 7-126338, or JP 63-86771 in combination with Dando et al.

Claim 12 has been rejected under 35 U.S.C. § 103(a) as obvious in view of either JP 55-27373 or JP 63-86771 in combination with either JP 7-126388 or U.S. Patent No. 4,847,624 (DeBlasi et al.). The teachings of JP 55-27373 and JP 63-86771 have been discussed above. The Examiner acknowledges that neither JP 55-27373 nor JP 63-86771 discloses a weight average molecular weight as recited in Claim 12, but states that JP 7-126388 or DeBlasi et al. discloses a weight average molecular weight within the claimed range.

However, it is respectfully submitted that Claim 12 is not obvious in view of either JP 55-27373 or JP 63-86771 in combination with either JP 7-126388 or DeBlasi et al. Claim 12 is dependent on Claim 1, which, as discussed above, has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as obvious in view of JP 55-27373 or JP 63-86771 in combination with either JP 7-126388 or DeBlasi et al. Accordingly, it is respectfully submitted that Claim 12 is not obvious in view of JP 55-27373 or JP 63-86771 in combination with either JP 7-126388 or DeBlasi et al. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claim 12 as obvious in view of JP 55-27373 or JP 63-86771 in combination with either JP 7-126388 or DeBlasi et al. is respectfully requested.

## PATENT

Claims 7-9 have been rejected under 35 U.S.C. § 103(a) as obvious in view of JP 7-126388 in combination with JP 55-27373. The teachings of JP 7-126388 have been discussed above. The Examiner acknowledges that JP 7-126388 does not teach the order of reacting the rosin, resol phenol resin, and polyhydric alcohol, but states that JP 55-27373 shows that conventionally the rosin can be either first reacted with the resol phenol resin or first reacted with the polyhydric alcohol, and that it would have been obvious to combine the teachings of JP 7-126388 with the teachings of JP 55-27373 to obtain the present invention.

However, it is respectfully submitted that Claims 7-9 are not obvious in view of JP 7-126388 in combination with JP 55-27373. Claims 7-9 are dependent on Claim 1, which, as discussed above, has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as obvious in view of JP 7-126388 in combination with JP 55-27373. Accordingly, it is respectfully submitted that Claims 7-9 are not obvious in view of JP 7-126388 in combination with JP 55-27373. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claims 7-9 as obvious in view of JP 7-126388 in combination with JP 55-27373 is respectfully requested.

Claims 11 and 15 have been rejected under 35 U.S.C. § 103(a) as obvious in view of JP 7-126388 in combination with U.S. Patent No. 4,002,585 (Oishi et al.). The teachings of JP 7-126388 have been discussed above. The Examiner acknowledges that JP 7-126388 does not teach the acid number and solubility of the phenol modified rosin ester, but states that Oishi et al. teaches the advantage of an acid number of not more than 30 and a solubility of the phenol modified rosin

## PATENT

ester of not less than five times in a petroleum hydrocarbon solvent, and that it would have therefore been obvious to combine the teachings of JP 7-126388 with the teachings of Oishi et al. to obtain the present invention.

However, it is respectfully submitted that Claims 11 and 15 are not obvious in view of JP 7-126388 in combination with Oishi et al. Claims 11 and 15 are dependent on Claim 1, which, as discussed above, has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as obvious in view of JP 7-126388 in combination with Oishi et al. Accordingly, it is respectfully submitted that Claims 11 and 15 are not obvious in view of JP 7-126388 in combination with Oishi et al. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claims 11 and 15 as obvious in view of JP 7-126388 in combination with Oishi et al. is respectfully requested.

Claim 15 has been rejected under 35 U.S.C. § 103(a) as obvious in view of JP 63-86771 in combination with Oishi et al. The teachings of JP 63-86771 have been discussed above. The Examiner acknowledges that JP 63-86771 does not teach the acid number and solubility of the phenol modified rosin ester, but states that Oishi et al. teaches the advantage of a solubility of the phenol modified rosin ester of not less than five times in a petroleum hydrocarbon solvent, and that it would have therefore been obvious to combine the teachings of JP 63-86771 with the teachings of Oishi et al. to obtain the present invention.



## PATENT

However, it is respectfully submitted that Claim 15 is not obvious in view of JP 63-86771 in combination with Oishi et al. Claim 15 is dependent on Claim 1, which, as discussed above, has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as obvious in view of JP 63-86771 in combination with Oishi et al. Accordingly, it is respectfully submitted that Claim 15 is not obvious in view of JP 63-86771 in combination with Oishi et al. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claim 15 as obvious in view of JP 63-86771 in combination with Oishi et al. is respectfully requested.

Claims 1-2, 4-11 and 13-17 have been rejected under 35 U.S.C. § 103(a) as obvious in view of Oishi et al. in combination with U.S. Patent No. 3,053,807 (Lederman et al.) or with the *Encyclopedia of Polymer Science and Engineering*. Oishi et al. teaches a process wherein rosin is reacted with resol phenol resin and polyhydric alcohol. The Examiner acknowledges that Oishi et al. does not teach a volatile base catalyst, but states that Lederman et al. teaches a volatile base catalyst such as an amine, and that the *Encyclopedia* teaches that special resoles can be obtained with amine catalysts. The Examiner takes the position that in view of the similarity of the catalysts presently claimed and the catalysts described by the *Encyclopedia* or by Lederman et al., and in view of the similarity of the temperatures recited in the claims and the temperatures disclosed in Oishi et al., it would have been obvious to combine the teachings of Oishi et al. with the teachings of Lederman et al. or of the *Encyclopedia* to obtain the present invention.

## PATENT

However, it is respectfully submitted that Claims 1-2, 4-11 and 13-17 are not obvious in view of Oishi et al. in combination with Lederman et al. or the *Encyclopedia*. As discussed above, Claim 1 has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as obvious in view of Oishi et al. in combination with Lederman et al. or the *Encyclopedia*. Accordingly, it is respectfully submitted that Claim 1 (and Claims 2, 4-11 and 13-17) is not obvious in view of Oishi et al. in combination with Lederman et al. or the *Encyclopedia*. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claims 1-2, 4-11 and 13-17 as obvious in view of Oishi et al. in combination with Lederman et al. or the *Encyclopedia* is respectfully requested.

Claim 3 has been rejected under 35 U.S.C. § 103(a) as obvious in view of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia of Polymer Science and Engineering* as applied to Claims 1-2, 4-11 and 13-17, and with Dando et al. The teachings of Oishi et al., Lederman et al. and the *Encyclopedia* have been discussed above. The Examiner acknowledges that Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* does not do not disclose conducting a reaction under an increased pressure as compared to atmospheric pressure. However, according to the Examiner, Dando et al. discloses that preparing phenol-formaldehyde in a sealed reactor under pressure has several advantages over using an open reactor. The Examiner's position is that it would have been obvious to combine the teachings of Dando et al. with the teachings of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* to obtain the present invention.

## PATENT

However, it respectfully submitted that Claim 1, which has been amended to incorporate the limitations of now canceled Claim 3, is not obvious in view of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-2, 4-11 and 13-17 and with Dando et al. As discussed above, Claim 1 has been amended to expressly recite that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 1 has been further amended to recite that phenol and formaldehyde react in the absence of a solvent. In contrast, Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* does not disclose or suggests reacting phenol and formaldehyde under an increased pressure in the absence of a solvent. Dando et al. does not cure the deficiencies of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia*. As discussed above, Dando et al., which discloses the preparation of a benzylic ether phenolic resol resin, requires the presence of a catalytic amount of a divalent metal. As further discussed above, Dando et al. does not disclose or suggest using the phenolic resin for the preparation of a phenol-modified rosin ester, as required by Claim 1. Accordingly, it is respectfully submitted that Claim 1 as amended is nonobvious and patentable in view of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-2, 4-11 and 13-17 and with Dando et al.

Claim 12 has been rejected under 35 U.S.C. § 103(a) as obvious in view of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia of Polymer Science and Engineering* as applied to Claims 1-2, 4-11 and 13-17 and with either JP 7-126388 or DeBlasi et al. The teachings of Oishi et al., Lederman et al. and the *Encyclopedia* have been discussed above. The Examiner acknowledges that Oishi et al. in combination with Lederman et al. or with the

## PATENT

*Encyclopedia* as applied to Claims 1-2, 4-11 and 13-17 does not disclose a weight average molecular weight as recited in Claim 12, but states that JP 7-126388 or DeBlasi et al. discloses a weight average molecular weight within the claimed range.

However, it is respectfully submitted that Claim 12 is not obvious in view of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-2, 4-11 and 13-17 and with either JP 7-126388 or DeBlasi et al. Claim 12 is dependent on Claim 1, which, as discussed above, has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as obvious in view of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-2, 4-11 and 13-17 and with either JP 7-126388 or DeBlasi et al. Accordingly, it is respectfully submitted that Claim 12 is not obvious in view of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-2, 4-11 and 13-17 and with either JP 7-126388 or DeBlasi et al. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claim 12 as obvious in view of Oishi et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-2, 4-11 and 13-17 and with either JP 7-126388 or DeBlasi et al. is respectfully requested.

Claims 1-8, 10-11 and 14 have been rejected under 35 U.S.C. § 103(a) as obvious in view of U.S. Patent No. 6,022,947 (Frihart et al.) in combination with Lederman et al. or the *Encyclopedia of Polymer Science and Engineering*. According to the Examiner, Frihart et al. teaches the limitations of the present invention except for the requirement of a volatile base catalyst.

## PATENT

The Examiner states that Lederman et al. teaches a volatile base catalyse such as an amine, and that the *Encyclopedia* teaches that special resoles can be obtained with amine catalysts. The Examiner takes the position that in view of the similarity of the catalysts presently claimed and the catalysts described by the *Encyclopedia* or by Lederman et al., and in view of the similarity of the temperatures recited in the claims and the temperatures disclosed in Frihart et al., it would have been obvious to combine the teachings of Frihart et al. with the teachings of Lederman et al. or of the *Encyclopedia* to obtain the present invention.

However, it is respectfully submitted that Claims 1-8, 10-11 and 14 are not obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia*. As discussed above, Claim 1 has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 1 has further been amended, as discussed above, to recite that the reaction takes place in the absence of solvent. It is respectfully submitted that Frihart et al. does not disclose or suggest reacting phenol with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure in the absence of solvent. Lederman et al. and the *Encyclopedia* do not cure the deficiency of Frihart et al. Accordingly, it is respectfully submitted that Claims 1 (and Claims 2-8, 10-11 and 14) are not obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia*. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claims 1-8, 10-11 and 14 as obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* is respectfully requested.

## PATENT

Claim 12 has been rejected under 35 U.S.C. § 103(a) as obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia of Polymer Science and Engineering* as applied to Claims 1-8, 10-11 and 14 and with either JP 7-126388 or DeBlasi et al. The teachings of Frihart et al., Lederman et al. and the *Encyclopedia* have been discussed above. The Examiner acknowledges that Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 does not disclose a weight average molecular weight as recited in Claim 12, but states that JP 7-126388 or DeBlasi et al. discloses a weight average molecular weight within the claimed range.

However, it is respectfully submitted that Claim 12 is not obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 and with either JP 7-126388 or DeBlasi et al. Claim 12 is dependent on Claim 1, which, as discussed above, has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 and with either JP 7-126388 or DeBlasi et al. Accordingly, it is respectfully submitted that Claim 12 is not obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 and with either JP 7-126388 or DeBlasi et al. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claim 12 as obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as

## PATENT

applied to Claims 1-8, 10-11 and 14 and with either JP 7-126388 or DeBlasi et al. is respectfully requested.

Claim 15 has been rejected under 35 U.S.C. § 103(a) as obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia of Polymer Science and Engineering* as applied to Claims 1-8, 10-11 and 14 and with Oishi et al. The teachings of Frihart et al., Lederman et al. and the *Encyclopedia* have been discussed above. The Examiner acknowledges that Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 does not teach the acid number and solubility of the phenol modified rosin ester, but states that Oishi et al. teaches the advantage of a solubility of the phenol modified rosin ester of not less than five times in a petroleum hydrocarbon solvent, and that it would have therefore been obvious to combine the teachings of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 with the teachings of Oishi et al. to obtain the present invention.

However, it is respectfully submitted that Claim 15 is not obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 and with Oishi et al. Claim 15 is dependent on Claim 1, which, as discussed above, has been amended to expressly recite the limitations of now canceled Claim 3, i.e. that phenol is reacted with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure. Claim 3 was not rejected as obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 and with Oishi et al. Accordingly, it is respectfully submitted that Claim 15 is not obvious in view of Frihart et al. in combination with

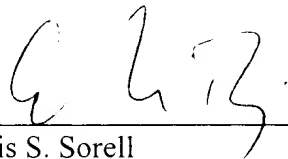
PATENT

Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 and with Oishi et al. In view of the foregoing, withdrawal of the rejection under 35 U.S.C. § 103(a) of Claim 15 as obvious in view of Frihart et al. in combination with Lederman et al. or with the *Encyclopedia* as applied to Claims 1-8, 10-11 and 14 and with Oishi et al. is respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In view of the foregoing, allowance of all claims in this application is respectfully requested.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE****In the Specification:**

The following paragraph has been inserted on page 1 after the title:

**CROSS-REFERENCE TO RELATED APPLICATIONS**

This application is a national phase application of International Application No.

PCT/JP00/02918, which was filed on May 2, 2000 and which published in Japanese on

November 16, 2000, which in turn claims priority from Japanese Application No. 11/127983,

which was filed on May 10, 1999.

**In the Claims:**

Claim 3 has been canceled.

Claims 1-2, 4-5, 7-8, and 13-15 have been amended as follows:

1. (Amended) A process for preparing a phenol-modified rosin ester [, the process comprising the step of] by reacting rosin with phenol, formaldehyde and polyhydric alcohol, [the process being characterized in that] wherein rosin or a polyhydric alcohol ester of rosin is reacted with a resol phenol resin which is prepared by reacting phenol with formaldehyde in a closed reactor under an increased pressure as compared to atmospheric pressure in the presence of a volatile base catalyst and in the absence of a solvent.

2. (Amended) The process according to claim 1, wherein the resol phenol resin is [one] prepared by reacting phenol with formaldehyde at 80 to 200 °C.

4. (Amended) The process according to claim 1, wherein the volatile base catalyst [in the resol phenol resin] is an amine.

## PATENT

5. (Amended) The process according to claim 1, wherein the resol phenol resin is [one] prepared by reacting one mole of phenol with 0.5 to 3 moles of formaldehyde.

7. (Amended) The process according to claim 1, wherein the resol phenol resin is [one] prepared by reacting rosin with a resol phenol resin to form a reaction mixture, and reacting the reaction mixture with polyhydric alcohol.

8. (Amended) The process according to claim 1, wherein the resol phenol resin is [one] prepared by reacting rosin with polyhydric alcohol to give a polyhydric alcohol ester of rosin, and reacting the [same] polyhydric alcohol ester of rosin with a resol phenol resin.

13. (Amended) The phenol-modified rosin ester according to claim 10 which has a softening point, measured by the ring and ball method, [(ring and ball method)] of 140 to 190 °C.

14. (Amended) The phenol-modified rosin ester according to claim 10, wherein the nitrogen residue content resulting from the volatile base catalyst [(] measured by microanalysis of total nitrogen by a catalyst oxidation conversion method [)] is 10 to 1,000 ppm.

15. (Amended) The phenol-modified rosin ester according to claim 10 which has a solubility in a petroleum hydrocarbon solvent having [(] boiling point of 276 to 313 °C and aniline point of 69°C [)] in the range of at least 2 times.